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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/503,765	02/14/2000	Hi-Chan Moon	678-455(P9161)	7130

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EXAMINER

DAVIS, TEMICA M

ART UNIT PAPER NUMBER

2681

13

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/503,765

Applicant(s)

MOON ET AL.

Examiner

Temica M. Davis

Art Unit

2681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6,8-10,12-14 and 16-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8-10,12-14 and 16-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 6/10/2004 have been considered but they are not fully persuasive.

Applicant argues that the sc bits describes in Miya do not read on the claimed power control bit used to measure a reception strength on the received channel. The examiner, however, disagrees.

Miya states in col. 4, line 58-col. 5, line 18 that the sc bit is an indicator for compensating the transmission power table which represents a relation between reception and transmission power. This section further states that the sc bit is indicative of decreasing the transmission power. Further, col. 9, lines 22-27 equates the sc bit to a transmission power control signal.

Applicant further argues that Miya fails to disclose (in the cited portion col. 5, lines 31-45), comparing the reception strength with a threshold and generating a signal for controlling transmission on a reverse link depends on the comparison. In that regards, the examiner should have also cited col. 2, lines 37-46 wherein the target value reads on threshold claimed.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5, 9, 13 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miya, U.S. Patent No. 6,347,231 in view of Hibino, U.S. Patent No. 5,444,862.

Regarding claims 1 and 9, Miya discloses a mobile station device (300, 400 600)/method for controlling transmission in a mobile communication system, comprising: a measurer for detecting a power control bit from a channel signal received on a forward link channel (col. 5, lines 27-29) and measuring a reception strength (i.e., received power and/or SIR) of the received channel signal using the detected power control bit (col. 5, lines 31-45 and col. 6, lines 19-28; a controller for comparing the reception strength with a threshold (col. 2, lines 37-46 wherein the target value reads on threshold claimed) and generating a signal for controlling transmission on a reverse link depending on the comparison (col. 5, lines 31-45); and a reverse link transmitter for channel transmission on the reverse link in response to the transmission control signal (col. 5, lines 22-26), wherein the reception strength of the forward link channel output from the measurer is a signal-to-noise ratio (SNR) calculated using the power control bit (col. 10, lines 22-61).

Miya, however, fails to disclose wherein the transmitter is used for stopping channel transmission on the reverse link in response to the transmission control signal.

In a similar field of endeavor, Hibino discloses a method for controlling transmission during handoff in a communication system. Hibino further discloses

wherein a transmitter of a mobile device is used for stopping channel transmission on the reverse link in response to a transmission control signal (col. 9, lines 2-34).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Miya with the teachings of Hibino for the purpose of preventing transmission errors due to poor signal reception.

Regarding claims 5. and 13, Miya discloses a mobile station device/method comprising: a measurer for detecting a power control bit from a channel signal received on a forward link channel and measuring a reception strength of the received channel signal using the detected power control bit (col. 5, lines 27-45 and col. 6, lines 19-28); a controller for comparing the reception strength with a threshold and generating a signal for transmission on a reverse link depending on the comparison (col. 5, lines 31-45); and a reverse link transmitter for performing channel transmission on the reverse link in response to the transmission signal (col. 5, lines 22-26) wherein the reception strength of the forward link channel output from the measurer is an SNR calculated using the power control bit (col. 9, lines 2-34).

Miya, however, fails to disclose wherein the transmitter is used in resuming signal transmissions after a transmission suspended state.

Hibino discloses a system wherein signal transmission is stopped while a signal reception level is below a certain threshold. Hibino further discloses wherein the transmissions are stopped only for a duration of time while reception signal strength is poor (col. 9, lines 5-17), and therefore, inherently will resume transmission when it is detected that reception signal quality is acceptable.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Miya with the teachings of Hibino for the purpose of transmitting signals during periods when reception signal quality is good, thereby reducing transmission errors.

Regarding claim 17, Miya discloses a method of controlling communication on a reverse link in a mobile communication system, comprising the steps of detecting a power control bit from a first channel signal received on a forward link channel and measuring a reception strength of the first channel signal using the detected power control bit; comparing the reception strength of the first channel signal with a first threshold and controlling a reverse link channel depending on the comparison (col. 5, lines 27-45 and col. 6, lines 7-28); detecting a power control bit from a subsequent channel signal received on the forward link channel as evidenced by the fact that the power control bits are periodically sent to the mobile device, and measuring a reception strength of the subsequent channel signal using the detected power control bit; comparing the reception strength of the subsequent channel signal with a second threshold and controlling the reverse link channel depending on the comparison (col. 6, lines 19-28), wherein the reception strength of the forward link channel is an SNR calculated using the power control bit (col. 10, lines 22-61).

Miya, however, fails to disclose wherein the transmission is controlled (i.e., stopped or resumed) based on a comparison of a received signal to a threshold.

Hibino reads on these limitations as explained in claims 1, 5, 9 and 13.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Miya with the teachings of Hibino for the purpose of transmitting signals during periods when reception signal quality is good, thereby reducing transmission errors.

Regarding claim 18, the combination of Miya and Hibino discloses the method recited in Claim 17, further comprising the step of releasing the reverse link channel and ending the communication if the signal strength of the first channel signal is determined unacceptable more times than a predetermined number for a predetermined time (Hibino, col. 9, lines 2-34).

Regarding claim 19, the combination of Miya and Hibino discloses the method recited in Claim 18, further comprising the step of returning to the step of detecting a power control bit from a first channel signal (as explained above) (Hibino, col. 9, lines 2-34).

4. Claims 2, 6, 10 and 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Miya, Hibino and Posti et al (Posti), U.S. Patent No. 6,466,794.

Regarding claims 2, 6, 10 and 14, the combination of Miya and Hibino discloses the mobile station device/method of claims 1, 5, 9 and 13 as described above. The combination, however, fails to disclose wherein the forward link channel is transmitted in a discontinuous transmission mode.

In a similar field of endeavor, Posti discloses channel allocation in a mobile communications system. Posti further discloses wherein the forward link channel is transmitted in a discontinuous transmission mode (col. 4, lines 27-46).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the combination of Miya and Hibino with the teachings of Posti for the purpose of reducing power consumption and lowering network interference levels (Posti, col. 1, lines 25-31).

5. Claims 4, 8, 12 and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Miya and Hibino in view of Hall, U.S. Patent No. 5,491,717.

Regarding claims 4, 8, 12 and 16, the combination of Miya and Hibino discloses the mobile device/method as described above, including the stopping and resuming of signal transmissions based on a comparison of received signal quality and a threshold.

The combination, however fails to disclose generating the transmission control signal based on an average value of reception strength.

In a similar field of endeavor, Hall discloses a method for controlling transmission during handoff in a communication system.

Hall further discloses using a mean received SNR to generate a transmission control signal (col. 7, lines 5-15).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the combination of Miya and Hibino with the teachings of Hall for the purpose of avoiding erratic stopping of the transmission (Hall, col. 7, lines 54-56).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Temica M. Davis whose telephone number is (703) 306-5837. The examiner can normally be reached on Monday-Thursday (alternate Fridays) 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (703) 308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Temica M. Davis
Examiner
Art Unit 2681

August 18, 2004



**TEMICA M. DAVIS
PATENT EXAMINER**